**Montana Department of Fish, Wildlife & Parks**

1420 E. Sixth Avenue
Helena, MT 59620-0701

March 16, 1995

TO: Environmental Quality Council, Capitol Building, Room 106, POB 201704, Helena, MT 59620-1704
Dept. of Fish, Wildlife & Parks
Resource Assessment, Helena
Fisheries Division, Helena & Region 3, Bozeman
Region 3 Information Officer, Bozeman
Montana State Library, 1515 E. Sixth Ave., POB 201800, Helena, MT 59620-1800
Jim Jensen, Montana Environmental Information Center, POB 1184, Helena, MT 59624
Janet Ellis, Montana Audubon Council, POB 595, Helena, MT 59624
George Ochenski, Government Affairs & Consulting, P.O. Box 689, Helena, MT 59624
U.S. Forest Service, Gardiner Ranger District, P.O. Box 5, Gardiner, MT 59030
Lorents Grosfield, HC87 Box 2145, Big Timber, MT 59011
State of Montana Electronic Bulletin Board System
Bill Warfield, Rt. 38 Box 2157, Livingston, MT 59047
Mill Creek Water and Sewer District, P.O. Box 152, Livingston, MT 59047
John Gray, P.O. Box 27, Pray, MT 59065

Ladies and Gentlemen:

An Environmental Assessment (EA) has been prepared for the proposed Mill Creek Water Leasing project. Water leasing is authorized by Montana's water leasing statute (85-2-436, MCA), which was enacted by the 1989 Montana Legislature as HB 707.

Additional water leases on Mill Creek will improve instream flows for the benefit of Yellowstone cutthroat trout that annually enter Mill Creek to spawn. The dewatering of Cedar Creek and other Yellowstone spawning tributaries during the irrigation season adversely affects the reproductive success of Yellowstone cutthroat trout. Tributary dewatering limits the production of the young cutthroats that are needed to replenish the Yellowstone's fishery.

An EA checklist is included with this document. Certain items on the checklist are more fully explained, as required, in the document.

This document is available for review at the Department's Regional Office in Bozeman, Helena Headquarters, State Library and the Environmental Quality Council. Any questions or comments should be directed to the undersigned by April 17, 1995.

Sincerely,

Liter E. Spence

Liter E. Spence
Water Resources Supervisor
Fisheries Division (406) 444-3888

Attachments

APR 13 1999

MAY 11 1999

APR 14 2000

MONTANA STATE LIBRARY
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Mill Creek Water Leasing Project :enviro
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Montana Fish, Wildlife & Parks
Fisheries Division
Environmental Assessment

# Mill Creek Water Leasing Project

## General Purpose:

Montana's water leasing statute (85-2-436 MCA) was enacted by the 1989 Legislature as HB 707. The issue arose primarily as a result of the 1988 drought's impact on stream fisheries. The purpose of the legislation is to study the feasibility of leasing existing water rights to enhance stream flows for fisheries. It is a pilot program that terminates in 1999 and allows Montana Fish, Wildlife & Parks (FWP) to lease water rights from willing individuals who have traditionally used the water for diversionary consumptive purposes. Mill Creek has been approved as a stream where increased flows would improve the reproductive habitat for Yellowstone cutthroat trout, a "Species of Special Concern" in Montana.

## I. Location of the Project:

Mill Creek, a 22-mile-long tributary to the upper Yellowstone River, is located in Park County about 20 miles south of Livingston, Montana, and 30 miles north of Yellowstone National Park (see attached map). It arises in the Gallatin National Forest in the high peaks of the Absaroka Range, and flows through a steep canyon and broad high bench along the east side of the Paradise Valley before discharging into the Yellowstone River. Mill Creek drains an area of about 150 square miles. Annual stream flow averages about 160 cfs at the canyon mouth.

Lands within the drainage are used for outdoor recreation, timbering , livestock grazing and irrigated crop production. About 4,300 acres are irrigated from Mill Creek. Irrigated lands are used for pasturing livestock and the production of alfalfa, grass hay, and some barley.

## II. Need for the Project:

The upper Yellowstone River, a highly valued sport fishery, supports brown, rainbow and Yellowstone cutthroat trout. Several small tributaries to the Yellowstone River are the only documented spawning sites for the river population of Yellowstone cutthroat trout, a fish classified as a "Species of Special Concern" in Montana due to its shrinking distribution and declining numbers. Dewatering of the lower segments of these tributaries during the irrigation season adversely affects the reproductive success of

Yellowstone cutthroat trout and, consequently, limits the production of new recruits for the Yellowstone River fishery. Studies by FWP and others show tributary dewatering to be an important, if not the major, factor regulating numbers of adult cutthroat in the Yellowstone River.

Yellowstone cutthroat begin entering the spawning tributaries in mid-June, with the peak of spawning occurring in early to mid-July. Eggs incubate in the spawning gravel for about 30 days before emerging as fry. By the end of September, most fry have migrated out of the tributaries into the main river. However, severe dewatering in some tributaries prevents the completion of this process or limits their reproductive contribution to the main Yellowstone. Mill Creek is one of those tributaries.

Low numbers of cutthroat trout spawners enter Mill Creek in some years. For the few that succeed in laying eggs, reproductive success is poor because the lower one-mile of creek is commonly dry when the eggs should be incubating in the gravel, and when fry should be emerging and migrating to the main river.

## III. Scope of the Project

The Mill Creek Water and Sewer District, comprised of Mill Creek water users on three major ditch systems, has improved delivery and on-farm irrigation efficiencies through the construction of a gravity pipeline irrigation system completed in cooperation with the SCS in 1992. Completed developments include a consolidated diversion structure, 4.2 miles of canal, 11.6 miles of pressurized delivery pipelines, and new sprinkler systems on 2,160 acres of land previously flood irrigated.

Approximately 15,800 acre-feet less water is now annually diverted from Mill Creek. During project planning, the conserved water was projected to substantially benefit the fishery resource by maintaining satisfactory cutthroat spawning flows in the lower six miles of Mill Creek in eight out of ten years.

The projected fishery benefits were based on the assumption that the bulk of the 15,800 acre-feet of conserved water would remain in perpetuity in the 6.4-mile-long reach of Mill Creek between the new diversion structure and the creek's mouth. However, no guarantees exist. In reality, this "added" flow will likely be subject to future depletions, causing fishery benefits to never materialize or to be far less than projected. Conserved water intended for instream use must be legally protected to guarantee that fishery benefits will be realized. The pilot water leasing program currently provides the only legal mechanism for protecting this instream flow.

FWP previously leased, for instream use, 6.13 cfs of early priority

water from a pipeline participant on Mill Creek. In addition, FWP leased 41.4 cfs to be released from the new pipeline for a 60 hour period in August to flush young cutthroats to the Yellowstone River. FWP's intent was to monitor its existing leases to determine if the water could be delivered to the creek's mouth and the leases successfully administered. If these trial leases proved workable, FWP intended to acquire additional Mill Creek leases. Because implementation of the existing leases proved successful in 1993 and 1994, FWP is seeking additional early water to build upon the current Mill Creek leases.

FWP proposes to lease, for a 10-year period, 2.64 cfs of conserved water from the Bar Walking Y Bar Ranch, a pipeline participant. This added water will increase leased instream flows in lower Mill Creek from a maximum of 6.13 cfs to a maximum of 8.77 cfs throughout the irrigation season.

Although FWP and the ranch have reached an agreement on this water lease, the lease cannot be implemented until a Change in Appropriation Water Right application is approved by DNRC. Any water users who feel they would be affected by this water lease have an opportunity to object to this "Change". The lease cannot be implemented until all objections have been resolved if, in fact, objections are received. The ten year lease period will begin the date the "Change" is approved by DNRC.

## IV. Environmental Impact Checklist

See the attached checklist.

## V. Explanation of Minor Impacts to the Physical Environment

### 1) Terrestrial and Aquatic Life and Habitat

There will be no adverse impacts to fish and wildlife from the proposed water lease. By improving stream flow during the traditionally dewatered period of the irrigation season, fisheries and, to some extent wildlife, habitat will be improved. There will be no introduction of new species into the stream due to the leasing project. Water leasing in Mill Creek will improve the spawning environment for Yellowstone cutthroat and thus increase overall populations in the Yellowstone River.

### 2) Water Quality, Quantity and Distribution

Water leasing will not result in any discharge to surface waters or any alterations of surface water quality. No changes in drainage patterns or the rate and amount of surface

runoff due to natural causes will occur. However, there will be changes in the amount of surface water in lower Mill Creek. The amount of surface water will increase by a maximum of about 2.64 cfs during the irrigation season. The quality of this water will remain the same as in the past.

4) Vegetation cover, quantity and quality

Existing vegetation along the dewatered portion of the stream will not be adversely affected by water leasing. On the contrary, the stream riparian area may benefit because some additional vegetative growth may occur because the stream will contain more water during the irrigation season in reaches formerly dewatered.

5) Aesthetics

Because a dry stream bed, or one containing little flow, is generally considered to be less aesthetic than a stream containing flowing water, water leasing should improve the aesthetics of lower Mill Creek. This portion of the stream is visible to travelers utilizing the East River Road and the Mill Creek Road. The additional flowing water during the irrigation season will be more aesthetically pleasing to travelers viewing the stream.

7. Unique, endangered, fragile or limited environmental resources

The Yellowstone cutthroat trout is a "Species of Special Concern" in Montana. Yellowstone cutthroats presently occupy no more than eight percent of their historic Montana range. Providing additional water in lower Mill Creek through leasing will increase spawning potential for Yellowstone cutthroat trout, thus improving the supply of young recruits to the Yellowstone River.

8) Demands on environmental resources

The intent of the water leasing program is to improve flows in streams traditionally dewatered for other uses. This project will improve the flows in lower Mill Creek, which will benefit the Yellowstone cutthroat population of the Yellowstone River. In the long-term, it could lead to additional fishing opportunities on the Yellowstone River due to increased numbers of cutthroat trout.

VI. Explanation of minor impacts to the human environment

4) Agricultural or industrial production

Under the lease agreement, a portion of the water that was formerly used to irrigate approximately 120 acres of crop land will now enhance instream flows in Mill Creek. Because irrigation efficiencies are greatly improved by the Mill Creek pipeline project, less water will now more effectively irrigate the same 120 acres, increasing crop yields. Irrigated agriculture and instream flows both benefit from the improved efficiencies.

## VII. Discussion and evaluation of reasonable alternatives

### 1) The "no action" alternative.

If sufficient water is not leased on Mill Creek, the following are likely to occur:

- Because there are no guarantees that water conserved by the Mill Creek pipeline project will remain in Mill Creek for instream use, conserved water will likely be depleted for new consumptive uses and by non-project water users.
- The spawning habitat in lower Mill Creek will continue to be only a portion of its potential.
- Egg and fry losses resulting from dewatering will continue.
- Improving the spawning potential for Yellowstone cutthroat trout from the Yellowstone River will not occur.
- Mill Creek's capacity to produce greater numbers of young cutthroat for the "recruitment limited" Yellowstone River will not be fully realized.

### 2) The Proposed Alternative

Water leasing in Mill Creek is an effort to improve flows in a stream that has traditionally been severely dewatered by the diversion of water for agricultural use. The proposed lease will provide a maximum of 2.64 cfs of additional flow in lower Mill Creek during the irrigation season, adding to the flow provided by the two existing leases.

### 3) Alternatives considered but not recommended

Other means for increasing instream flows in Mill Creek are not feasible in the near term. At this time, water leasing is the most viable option for the following reasons:

- There are no existing storage projects on Mill Creek and, to our knowledge, none are planned for the immediate future.
- Montana law prevents the purchase of water rights for instream flows.
- There are no planned transbasin diversions which would allow flow augmentation in Mill Creek.

## VIII. Environmental Assessment Conclusion

### 1. Is an EIS required?

No. This review has clearly demonstrated that the impacts associated with this project are insignificant. The net result of the proposed work is a positive improvement to the human and physical environment.

### 2. Public comment

This is not a significant action. Therefore, this EA was not advertised for public comment. Limited opposition to leasing was expressed by some water users on Mill Creek prior to the implementation of FWP's existing Mill Creek leases. Objectors to leasing will have an opportunity to present their case when the application to Change Appropriation Water Right is noticed by the Dept. of Natural Resources and Conservation (DNRC). It should be noted that no objections were filed when FWP's existing leases were noticed.

### 3. Public Notice

Before this water lease can be implemented, it must be approved by the DNRC. DFWP has submitted to DNRC an Application to Change Appropriation Water Right, which will be publicly noticed in local newspapers. Any objections to the change must be resolved before the lease is approved. The change will be denied by DNRC if the lease is found to adversely affect the water rights of other users on Mill Creek.

### 4. Name, title, address & phone number of person responsible for preparing the EA

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Fisheries Division
Department of Fish, Wildlife & Parks
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Bozeman, MT 59715
(406) 994-6937

**DEPARTMENT OF FISH, WILDLIFE AND PARKS**
1420 E 6th Ave, PO Box 200701 Helena, MT 59620-0701
(406) 444-2535

**ENVIRONMENTAL ASSESSMENT**

Project Title Mill Creek Water Lease

Division/Bureau Fisheries

Program Water Leasing Study and Pilot Project

Description of Project FWP proposes to lease 2.64 cfs of conserved water rights to enhance instream flows in Mill Creek, a tributary to the Yellowstone River in Park County. Leasing will improve spawning habitat for migratory cutthroat trout from the Yellowstone River.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

| | MAJOR | MODERATE | MINOR | NONE | UNKNOWN | COMMENTS ON ATTACHED PAGES |
|---|---|---|---|---|---|---|
| 1. Terrestrial & aquatic life and habitats | | | X | | | X |
| 2. Water quality, quantity & distribution | | | X | | | X |

| | | | | | | |
|---|---|---|---|---|---|---|
| 3. Geology & soil quality, stability & moisture | | | | X | | |
| 4. Vegetation cover, quantity & quality | | | X | | | X |
| 5. Aesthetics | | | X | | | X |
| 6. Air quality | | | | X | | |
| 7. Unique, endangered, fragile, or limited environmental resources | | | X | | | X |
| 8. Demands on environmental resources of land, water, air & energy | | | X | | | X |
| 9. Historical & archaeological sites | | | | X | | See SHPO ltr attached |

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

| | MAJOR | MODERATE | MINOR | NONE | UNKNOWN | COMMENTS ON ATTACHED PAGES |
|---|---|---|---|---|---|---|
| 1. Social structures & mores | | | | X | | |
| 2. Cultural uniqueness & diversity | | | | X | | |
| 3. Local & state tax base & tax revenue | | | | X | | |
| 4. Agricultural or industrial production | | | | X | | X |
| 5. Human health | | | | X | | |
| 6. Quantity & distribution of community & personal income | | | | X | | |
| 7. Access to & quality of recreational and wilderness activities | | | | X | | |
| 8. Quantity & distribution of employment | | | | X | | |
| 9. Distribution & density of population & housing | | | | X | | |
| 10. Demands for government services | | | | X | | |
| 11. Industrial & commercial activity | | | | X | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12. Demands for energy | | | | X | | |
| 13. Locally adopted environmental plans & goals | | | | X | | |
| 14. Transportation networks & traffic flows | | | | X | | |

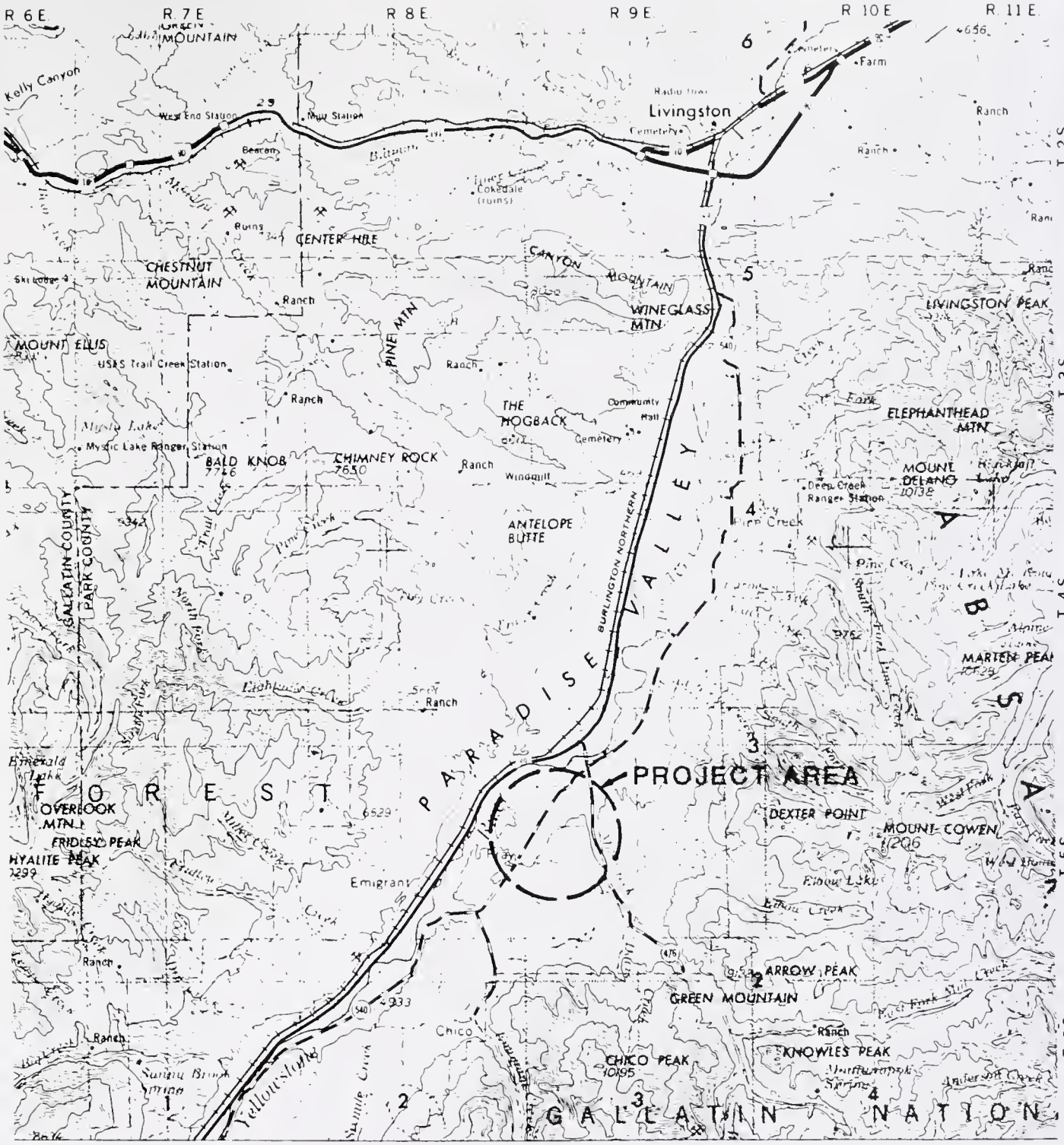
Other groups or agencies contacted or which may have overlapping jurisdiction None

Individuals or groups contributing to this EA State Historic Preservation Office

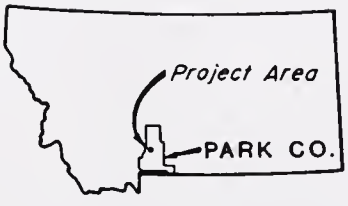
Recommendation concerning preparation of EIS EIS not required.

EA prepared by : Fred Nelson

Date: March, 1995




Project Area Boundary




NOTE: Location map base is from the Bozeman AMS Quad, 1:250,000.

FIGURE 1

LOCATION MAP

# MILL CREEK WATERSHED

PARK COUNTY, MONTANA

SCALE: 1:250,000